

=> FILE REG  
FILE 'REGISTRY' ENTERED AT 11:06:11 ON 09 APR 2008  
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=> D HIS

FILE 'HCAPLUS' ENTERED AT 10:22:53 ON 09 APR 2008  
L1        617 S KEMNITZ ?/AU  
L2        19355 S GROSS ?/AU  
L3        1414 S RUEDIGER ?/AU OR RUDIGER ?/AU  
L4        20 S L1 AND L2 AND L3  
L5        70650 S FLUORIDE#/TI  
L6        15 S L4 AND L5  
            SEL L6 11,12,14 RN

FILE 'REGISTRY' ENTERED AT 10:24:53 ON 09 APR 2008  
L7        41 S E1-E41  
L8        274737 S (M (L) F (L) C)/ELS  
L9        2 S L7 AND L8

FILE 'HCAPLUS' ENTERED AT 10:29:54 ON 09 APR 2008  
            SEL L4 1-20 RN

FILE 'REGISTRY' ENTERED AT 10:30:01 ON 09 APR 2008  
L10       143 S E42-E184  
L11       2 S L10 AND L8  
L12       2421 S (M (L) F)/ELS (L) 2/ELC.SUB  
L13       51127 S 1/C AND F/ELS  
L14       225 S L13 AND 2/ELC.SUB  
L15       253 S L13 AND H/ELS AND 3/ELC.SUB  
L16       113 S L13 AND CL/ELS AND 3/ELC.SUB  
L17       218 S L13 AND H/ELS AND CL/ELS AND 4/ELC.SUB  
L18       809 S L14-L17  
L19       97557 S L8 AND 1/NC  
L20       177180 S L8 NOT L19  
            E HYDROGEN FLUORIDE/CN  
L21       1 S E3

FILE 'HCA' ENTERED AT 10:45:19 ON 09 APR 2008  
L22       9050 S L12/P  
L23       44488 S L19  
L24       43445 S L18  
L25       143938 S L21 OR HF OR HYDROGEN#(A)FLUORIDE# OR HYDROFLUORIC#(A)A

L26            115 S L22 AND L23  
L27            4 S L26 AND L24  
L28            18 S L26 AND L25  
L29            426 S AMORPH?(2A) (FLUORIDE# OR DIFLUORIDE# OR TRIFLUORIDE# OR  
L30            228611 S SURFACE?(2A) AREA# OR (SP# OR SPEC# OR SPECIFIC#) (2A) (SU  
L31            126314 S L12  
L32            1139 S L31 AND L23  
L33            48 S L32 AND L24  
L34            98 S L32 AND L25  
L35            2 S (L33 OR L34) AND L29  
L36            3 S (L33 OR L34) AND L30

FILE 'REGISTRY' ENTERED AT 10:55:18 ON 09 APR 2008  
L37            93054 S L8 AND CCS/CI

FILE 'HCA' ENTERED AT 11:02:07 ON 09 APR 2008  
L38            38043 S L37  
L39            900 S L31 AND L38  
L40            29 S L39 AND L24  
L41            89 S L39 AND L25  
L42            1 S (L40 OR L41) AND L29  
L43            2 S (L40 OR L41) AND L30  
L44            2 S L40 AND L22  
L45            15 S L41 AND L22  
L46            22 S L27 OR L28 OR L35 OR L36 OR L42 OR L43 OR L44 OR L45  
L47            18 S 1840-2003/PY,PRY,AY AND L46

=> FILE HCA  
FILE 'HCA' ENTERED AT 11:07:01 ON 09 APR 2008  
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=> D L47 1-18 BIB ABS HITSTR HITIND

L47 ANSWER 1 OF 18 HCA COPYRIGHT 2008 ACS on STN  
AN 141:125808 HCA Full-text  
TI Method for the preparation of high surface area  
metal fluorides  
IN Kemnitz, Erhard; Gross, Udo; Ruediger, Stephan  
PA Humboldt-Universitaet zu Berlin, Germany  
SO PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2004060806	A1	20040722	WO 2004-EP49	200401 07	
				<--		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ					
EP	1440939	A1	20040728	EP 2003-221	200301 07	
				<--		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
EP	1585705	A1	20051019	EP 2004-700458	200401 07	
				<--		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
JP	2006514913	T	20060518	JP 2006-500526	200401 07	
				<--		
US	20060052649	A1	20060309	US 2005-541612	200507 07	
				<--		
PRAI	EP 2003-221	A	20030107	<--		
US	2003-438308P	P	20030107	<--		
EP	2003-6656	A	20030325	<--		
WO	2004-EP49	W	20040107			
AB	The present invention is related to a method for prepg. an amorphous metal fluoride $M_x+F_{x-\delta}$ comprising the steps of (a) providing a precursor, whereby the precursor comprises a structure of $M_x+F_{x-\delta}-yBy$ ; and (b) reacting the precursor with a fluorinating agent generating the amorphous metal fluoride of $M_x+F_{x-\delta}$ , whereby M is					

selected from the group comprising metals of the 2nd, 3rd and 4th main group and any subgroup of the periodic table, B is a coordinately bound group; x is 2 or 3; yr is any integer between 1 and 3; δ is 0 to 0.1; and  $(x-\delta) > y$ .

- IT 75-71-8, Dichlorodifluoromethane  
(CFC 12; method for prepn. of high surface area metal fluorides for use as catalysts)  
RN 75-71-8 HCA  
CN Methane, dichlorodifluoro- (CA INDEX NAME)



- IT 7788-97-8P, Chromium (III) fluoride  
(MgF<sub>2</sub> doped with; method for prepn. of high surface area metal fluorides for use as catalysts)  
RN 7788-97-8 HCA  
CN Chromium fluoride (CrF<sub>3</sub>) (CA INDEX NAME)



- IT 7783-50-8P, Ferric fluoride  
(dopant for MgF<sub>2</sub>; method for prepn. of high surface area metal fluorides for use as catalysts)  
RN 7783-50-8 HCA  
CN Iron fluoride (FeF<sub>3</sub>) (CA INDEX NAME)



- IT 24586-58-1DP, complexes with isopropanol  
(intermediate; method for prepn. of high surface area metal fluorides for use as catalysts)  
RN 24586-58-1 HCA  
CN Aluminum, difluoro(2-propanolato)- (CA INDEX NAME)



IT 7783-49-5P, Zinc fluoride 11113-59-0P, Copper fluoride 11113-65-8P, Iron fluoride 39427-37-7P, Vanadium fluoride 55128-73-9P, Tin fluoride  
     (method for prepn. of high surface area metal fluorides for use as catalysts)  
 RN 7783-49-5 HCA  
 CN Zinc fluoride (ZnF<sub>2</sub>) (CA INDEX NAME)



RN 11113-59-0 HCA  
 CN Copper fluoride (CA INDEX NAME)

Component	Ratio	Component
		Registry Number
F	x	14762-94-8
Cu	x	7440-50-8

RN 11113-65-8 HCA  
 CN Iron fluoride (CA INDEX NAME)

Component	Ratio	Component
		Registry Number
F	x	14762-94-8
Fe	x	7439-89-6

RN 39427-37-7 HCA  
 CN Vanadium fluoride (CA INDEX NAME)

Component	Ratio	Component
		Registry Number
F	x	14762-94-8
V	x	7440-62-2

RN 55128-73-9 HCA  
CN Tin fluoride (CA INDEX NAME)

Component	Ratio	Component
		Registry Number
F	x	14762-94-8
Sn	x	7440-31-5

IT 7783-40-6P, Magnesium fluoride (MgF<sub>2</sub>) 7784-18-1P,  
Aluminum fluoride (AlF<sub>3</sub>)  
(method for prepn. of high surface area metal  
fluorides for use as catalysts)

RN 7783-40-6 HCA  
CN Magnesium fluoride (MgF<sub>2</sub>) (CA INDEX NAME)



RN 7784-18-1 HCA  
CN Aluminum fluoride (AlF<sub>3</sub>) (CA INDEX NAME)



IT 75-69-4, Fluorotrichloromethane 75-72-9,  
Chlorotrifluoromethane  
(method for prepn. of high surface area metal  
fluorides for use as catalysts)

RN 75-69-4 HCA  
CN Methane, trichlorofluoro- (CA INDEX NAME)



RN 75-72-9 HCA  
CN Methane, chlorotrifluoro- (CA INDEX NAME)



IT 7664-39-3, Hydrogen fluoride, reactions  
     (method for prepn. of high surface area metal  
       fluorides for use as catalysts)  
 RN 7664-39-3 HCA  
 CN Hydrofluoric acid (CA INDEX NAME)

HF

IC ICM C01F007-50  
     ICS C01F005-28; C01B009-08  
 CC 49-5 (Industrial Inorganic Chemicals)  
     Section cross-reference(s): 67  
 ST surface area metal fluoride fluorination  
     catalyst coordination precursor solvent  
 IT Enolates  
     Metal alkoxides  
         (Cl- C5, metal fluoride complexes, precursors; method for prepn.  
           of high surface area metal fluorides for use  
           as catalysts)  
 IT Coordination compounds  
         (catalyst precursors; method for prepn. of high surface  
           area metal fluorides for use as catalysts)  
 IT Hydrocarbons, reactions  
         (chlorofluorocarbons, fluorinating agents; method for prepn. of  
           high surface area metal fluorides for use as  
           catalysts)  
 IT Controlled atmospheres  
         (during fluorination reaction; method for prepn. of high  
           surface area metal fluorides for use as  
           catalysts)  
 IT Amorphous materials  
         (fluorides; method for prepn. of high surface  
           area metal fluorides for use as catalysts)  
 IT Alcohols, preparation  
         (metal fluoride complexes; method for prepn. of high

- surface area metal fluorides for use as catalysts)
- IT Carboxylic acids, reactions
  - (metal salts, C1- C5, metal fluoride salts, precursors; method for prepn. of high surface area metal fluorides for use as catalysts)
- IT Acetylation
- Benzoylation
- Disproportionation
- Disproportionation catalysts
- Fluorination
- Fluorination
- Hydrofluorination
- Hydrofluorination catalysts
- Isomerization
- Isopropylation
  - (method for prepn. of high surface area metal fluorides for use as catalysts)
- IT Fluorides, preparation
  - (method for prepn. of high surface area metal fluorides for use as catalysts)
- IT Alcohols, reactions
- Alkanes, reactions
- Ethers, reactions
- Ketones, reactions
  - (method for prepn. of high surface area metal fluorides for use as catalysts)
- IT Lewis acids
  - (method for prepn. of high surface area metal fluorides for use as catalysts)
- IT Alkaline earth compounds
  - (method for prepn. of high surface area metal fluorides for use as catalysts)
- IT Group IIIA element compounds
  - (method for prepn. of high surface area metal fluorides for use as catalysts)
- IT Group IVB element compounds
  - (method for prepn. of high surface area metal fluorides for use as catalysts)
- IT Solvents
  - (org.; method for prepn. of high surface area metal fluorides for use as catalysts)
- IT Acetylation catalysts
- Alkylation catalysts
- Benzoylation catalysts
- Catalysts
- Isomerization catalysts

- (prep. of; method for prepn. of high surface area metal fluorides for use as catalysts)
- IT 75-71-8, Dichlorodifluoromethane  
(CFC 12; method for prepn. of high surface area metal fluorides for use as catalysts)
- IT 7788-97-8P, Chromium (III) fluoride  
(MgF<sub>2</sub> doped with; method for prepn. of high surface area metal fluorides for use as catalysts)
- IT 7783-50-8P, Ferric fluoride  
(dopant for MgF<sub>2</sub>; method for prepn. of high surface area metal fluorides for use as catalysts)
- IT 24586-58-1DP, complexes with isopropanol  
(intermediate; method for prepn. of high surface area metal fluorides for use as catalysts)
- IT 98-82-8P, Isopropylbenzene 100-06-1P 306-83-2P 354-33-6P  
2837-89-0P 31287-77-1P, Methoxybenzophenone  
(method for prepn. of high surface area metal fluorides for use as catalysts)
- IT 7783-49-5P, Zinc fluoride 11113-56-7P, Chromium fluoride  
11113-59-0P, Copper fluoride 11113-65-8P, Iron  
fluoride 39427-37-7P, Vanadium fluoride  
55128-73-9P, Tin fluoride  
(method for prepn. of high surface area metal fluorides for use as catalysts)
- IT 7783-40-6P, Magnesium fluoride (MgF<sub>2</sub>) 7784-18-1P,  
Aluminum fluoride (AlF<sub>3</sub>)  
(method for prepn. of high surface area metal fluorides for use as catalysts)
- IT 75-69-4, Fluorotrichloromethane 75-72-9,  
Chlorotrifluoromethane  
(method for prepn. of high surface area metal fluorides for use as catalysts)
- IT 67-56-1, Methanol, reactions  
(method for prepn. of high surface area metal fluorides for use as catalysts)
- IT 7727-37-9, Nitrogen, uses  
(method for prepn. of high surface area metal fluorides for use as catalysts)
- IT 64-18-6, Formic acid, reactions 64-19-7, Acetic acid, reactions  
79-09-4, Propionic acid, reactions  
(method for prepn. of high surface area metal fluorides for use as catalysts)
- IT 71-43-2, Benzene, reactions 75-29-6, Isopropyl chloride 98-88-4,  
Benzoyl chloride 100-66-3, Anisole, reactions 109-88-6  
127-18-4, Tetrachloroethylene, reactions 555-31-7, Aluminum  
triisopropoxide 661-95-0, 1,2-Dibromohexafluoropropane  
1333-82-0, Chromium oxide (CrO<sub>3</sub>) 7664-39-3,

Hydrogen fluoride, reactions 7705-08-0, Ferric chloride, reactions 10025-73-7, Chromium chloride (CrCl<sub>3</sub>) 117533-90-1

(method for prepn. of high surface area metal fluorides for use as catalysts)

IT 38568-21-7P, 2,2-Dibromohexafluoropropane  
(method for prepn. of high surface area metal fluorides for use as catalysts)

IT 1344-28-1, Alumina, uses  
(support; method for prepn. of high surface area metal fluorides for use as catalysts)

L47 ANSWER 2 OF 18 HCA COPYRIGHT 2008 ACS on STN

AN 136:121969 HCA Full-text

TI Preparation and etching processing of planar thin film of Pr<sup>3+</sup>-doped fluorozirconate glass

AU Kawamoto, Y.; Teramoto, M.; Hatano, T.; Shojiya, M.

CS Department of Chemistry, Faculty of Science, Kobe University, Kobe, 657-8501, Japan

SO Journal of Materials Science (2001), 36(20), 5013-5016

CODEN: JMTSAS; ISSN: 0022-2461

PB Kluwer Academic Publishers

DT Journal

LA English

AB Planar thin-films of a 60ZrF<sub>4</sub>-35BaF<sub>2</sub>-5PrF<sub>3</sub> compn. were successfully prepd. from Zr(hfa)<sub>4</sub>, Ba(hfa)<sub>2</sub>(tg), Pr(fod)<sub>3</sub> and NF<sub>3</sub> by an electron cyclotron resonance plasma-enhanced chem. vapor deposition technique. The films obtained were colorless and amorphous. As etching processing of the prepd. thin-film, dry etching was performed using Ar, CF<sub>4</sub>, SF<sub>6</sub>, Cl<sub>2</sub> and Cl<sub>2</sub>-BCl<sub>3</sub> gases. The Ar etching in which no reactive ion-etching is anticipated exhibited the fastest etching rate. Wet etching was also performed using a ZrOCl<sub>2</sub>-HCl etching soln. The etching rate was extremely fast compared with those of dry etching. In this etching, however, undesirable side-etching occurred. At the present stage, therefore, the most preferable etching processing is dry etching by an Ar gas.

IT 75-73-0, Carbon tetrafluoride CF<sub>4</sub>  
(etching gas; plasma-enhanced CVD prepn. and dry plasma etching processing of planar thin films of Pr<sup>3+</sup>-doped fluorozirconate glass)

RN 75-73-0 HCA

CN Methane, tetrafluoro- (CA INDEX NAME)



IT 7783-64-4P 7787-32-8P, Barium fluoride (BaF<sub>2</sub>)  
13709-46-1E, Praseodymium fluoride (PrF<sub>3</sub>)  
(glass, barium fluorozirconate; plasma-enhanced CVD prepn. and  
dry plasma etching processing of planar thin films of Pr<sup>3+</sup>-doped  
fluorozirconate glass)  
RN 7783-64-4 HCA  
CN Zirconium fluoride (ZrF<sub>4</sub>), (T-4)- (CA INDEX NAME)



RN 7787-32-8 HCA  
CN Barium fluoride (BaF<sub>2</sub>) (CA INDEX NAME)

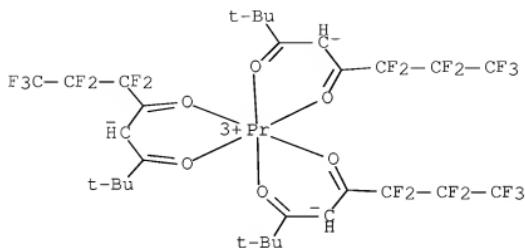


RN 13709-46-1 HCA  
CN Praseodymium fluoride (PrF<sub>3</sub>) (CA INDEX NAME)



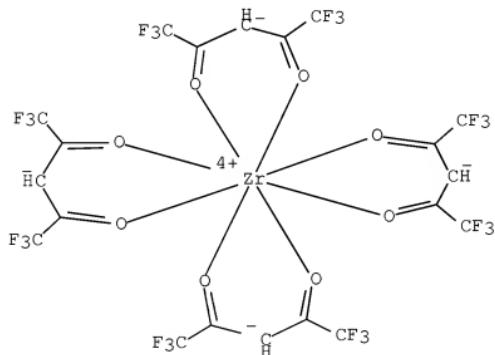
IT 17978-77-7 19530-02-0  
(precursor; plasma-enhanced CVD prepn. and dry plasma etching  
processing of planar thin films of Pr<sup>3+</sup>-doped fluorozirconate  
glass)  
RN 17978-77-7 HCA  
CN Praseodymium, tris(6,6,7,7,8,8,8-heptafluoro-2,2-dimethyl-3,5-

octanedionato- $\kappa$ O3,  $\kappa$ O5)- (CA INDEX NAME)



RN 19530-02-0 HCA

CN Zirconium, tetrakis(1,1,1,5,5,5-hexafluoro-2,4-pentanedionato- $\kappa$ O,  $\kappa$ O')-, (SA-8-11'1'1''1'''1''''11''')- (9CI) (CA INDEX NAME)



CC 57-1 (Ceramics)

Section cross-reference(s): 65

IT 75-73-0, Carbon tetrafluoride CF4 2551-62-4, Sulfur fluoride (SF6), (OC-6-11)- 7440-37-1, Argon, uses 7782-50-5,

Chlorine, uses 10294-34-5, Borane, trichloro-  
(etching gas; plasma-enhanced CVD prepn. and dry plasma etching  
processing of planar thin films of Pr<sup>3+</sup>-doped fluorozirconate  
glass)

- IT 7783-64-AP 7787-32-8P, Barium fluoride (BaF<sub>2</sub>)  
13709-46-1P, Praseodymium fluoride (PrF<sub>3</sub>)  
(glass, barium fluorozirconate; plasma-enhanced CVD prepn. and  
dry plasma etching processing of planar thin films of Pr<sup>3+</sup>-doped  
fluorozirconate glass)
- IT 7783-54-2, Nitrogen fluoride (NF<sub>3</sub>) 17973-77-7  
19530-02-0 134316-23-7  
(precursor; plasma-enhanced CVD prepn. and dry plasma etching  
processing of planar thin films of Pr<sup>3+</sup>-doped fluorozirconate  
glass)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 3 OF 18 HCA COPYRIGHT 2008 ACS on STN

AN 132:153753 HCA Full-text

TI Fluid storage and dispensing vessel with modified high  
surface area solid as fluid storage medium

IN Tom, Glenn M.; Brown, Duncan W.

PA Advanced Technology Materials, Inc., USA

SO U.S., 11 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 6027547	A	20000222	US 1998-80536	199805 18
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PRAI US 1997-46781P P 19970516 <--

AB A fluid storage and dispensing system comprises a fluid storage and  
dispensing vessel constructed and arranged for selective dispensing  
of fluid therefrom; a solid-phase support in the vessel; and an  
affinity medium on the solid-phase support, wherein the affinity  
medium reversibly takes up the fluid when contacted therewith, and  
from which the fluid is disengagable under dispensing conditions. The  
affinity medium may be a liq., oil, gel, or solid (porous solid, thin  
film solid, or bulk solid). The system of the invention may be  
employed for the storage and dispensing of fluids such as hydride,  
halide and dopant gases for manufg. of semiconductor products. PVA,  
polyvinylamine, divinylbenzene.

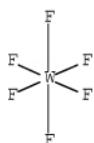
IT 7664-39-3, Hydrogen fluoride, uses  
7783-58-6, Germanium tetrafluoride 7783-82-6,  
Tungsten hexafluoride 14781-45-4  
(fluid storage and dispensing vessel with modified high  
surface area solid as fluid storage medium)  
RN 7664-39-3 HCA  
CN Hydrofluoric acid (CA INDEX NAME)

HF

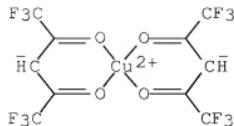
RN 7783-58-6 HCA  
CN Germane, tetrafluoro- (CA INDEX NAME)



RN 7783-82-6 HCA  
CN Tungsten fluoride (WF<sub>6</sub>), (OC-6-11)- (CA INDEX NAME)



RN 14781-45-4 HCA  
CN Copper, bis(1,1,1,5,5-hexafluoro-2,4-pentanedionato-  
κO<sub>2</sub>,κO<sub>4</sub>)-, (SP-4-1)- (CA INDEX NAME)



IC ICM B01D053-04  
 INCL 095096000  
 CC 47-7 (Apparatus and Plant Equipment)  
     Section cross-reference(s): 76  
 IT Waxes  
     (carbonaceous; fluid storage and dispensing vessel with modified high surface area solid as fluid storage medium)  
 IT Silanes  
     (chloro; fluid storage and dispensing vessel with modified high surface area solid as fluid storage medium)  
 IT Fluids  
     Gases  
     Liquids  
     Materials handling  
     Semiconductor device fabrication  
     Solids  
     Storage  
         (fluid storage and dispensing vessel with modified high surface area solid as fluid storage medium)  
 IT Halides  
     Hydrides  
     Polysiloxanes, uses  
     Silanes  
         (fluid storage and dispensing vessel with modified high surface area solid as fluid storage medium)  
 IT 67-63-0, Isopropanol, uses 71-55-6, 1,1,1-Trichloroethane  
 75-24-1, Trimethylaluminum 78-10-4, Tetraethylorthosilicate  
 78-10-4D, Tetraethylorthosilicate, fluorinated derivs. 78-40-0,  
 Triethylphosphate 97-94-9, Triethylborane 121-43-7,  
 Trimethylborate 121-45-9, Trimethylphosphite 122-52-1,  
 Triethylphosphite 150-46-9, Triethylborate 156-60-5,  
 trans-1,2-Dichloroethene 512-56-1, Trimethylphosphate 546-68-9,  
 Titaniumisopropoxide 556-67-2, Octamethylcyclotetrasiloxane  
 593-90-8, Trimethylborane 594-10-5, Trimethylantimony 754-05-2,  
 Vinyl trimethylsilane 1445-79-0, Trimethylgallium 1590-87-0,  
 Disilane 3275-24-9, Tetrakisdimethylamidotitanium 3385-78-2,

Trimethylindium 4419-47-0, Tetrakisdiethylamidotitanium  
7550-45-0, Titanium tetrachloride, uses 7647-01-0, Hydrogen  
chloride, uses 7664-39-3, Hydrogen  
fluoride, uses 7664-41-7, Ammonia, uses 7719-12-2,  
Phosphorous trichloride 7782-50-5, Chlorine, uses 7782-65-2,  
Germane 7783-06-4, Hydrogen sulfide, uses 7783-07-5, Hydrogen  
selenide 7783-09-7, Hydrogen telluride 7783-54-2, Nitrogen  
trifluoride 7783-58-6, Germanium tetrafluoride  
7783-61-1, Silicon tetrafluoride 7783-82-6, Tungsten  
hexafluoride 7784-42-1, Arsine 7803-51-2, Phosphine 7803-52-3,  
Stibine 10025-78-2, Trichlorosilane 10034-85-2, Hydrogen iodide  
10035-10-6, Hydrogen bromide, uses 10294-34-5, Boron trichloride  
13283-31-3, Borane, uses 13463-40-6, Iron pentacarbonyl  
14781-45-4 19287-45-7, Diborane 19824-59-0 20396-66-1,  
Boron deuteride (b2d6) 55161-66-5, Pentakisdiethylamidotantalum  
62350-91-8, Dimethylaluminum hydroxide  
(fluid storage and dispensing vessel with modified high  
surface area solid as fluid storage medium)

RE.CNT 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 4 OF 18 HCA COPYRIGHT 2008 ACS on STN  
AN 129:136208 HCA Full-text  
TI Formation of Grignard Species from the Reaction of Methyl Halides  
with Laser-Ablated Magnesium Atoms. A Matrix Infrared Study of  
CH<sub>3</sub>MgF, CH<sub>3</sub>MgCl, CH<sub>3</sub>MgBr, and CH<sub>3</sub>MgI  
AU Bare, William D.; Andrews, Lester  
CS Department of Chemistry, University of Virginia, Charlottesville,  
VA, 22901, USA  
SO Journal of the American Chemical Society (1998), 120(29),  
7293-7301  
CODEN: JACSAT; ISSN: 0002-7863  
PB American Chemical Society  
DT Journal  
LA English  
AB Mg atoms generated by laser ablation were reacted with Me halides  
dild. (0.5% to 0.1%) in Ar. Reaction products were trapped in a  
cryogenic Ar matrix and analyzed by IR spectroscopy. The primary  
reaction product, isolated Grignard mol. CH<sub>3</sub>MgX, and the secondary  
reaction products MgX, MgX<sub>2</sub>, MgH, MgH<sub>2</sub>, CH<sub>4</sub>, C<sub>2</sub>H<sub>6</sub>, CH<sub>2</sub>X, CH<sub>3</sub>MgCH<sub>3</sub>,  
XMgCH<sub>2</sub>, HMgCH<sub>3</sub>, and HMgCH<sub>2</sub>X were identified by isotopic (13C, D, and  
26Mg) substitution and by correlation with B3LYP and BP86 isotopic  
frequency calcns. This study reports the 1st exptl. evidence for the  
fluoride Grignard species, CH<sub>3</sub>MgF. IR absorptions were also obsd.  
for assocd. Grignard species.  
IT 558-21-4 593-53-3, Methyl fluoride  
20866-44-8

(formation of Grignard species from reaction of Me halides with  
laser-ablated magnesium atoms)

RN 558-21-4 HCA

CN Methane-d3, fluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 593-53-3 HCA

CN Methane, fluoro- (CA INDEX NAME)



RN 20666-44-8 HCA

CN Methane-13C, fluoro- (8CI, 9CI) (CA INDEX NAME)



IT 420-09-7P, Methylmagnesium fluoride 7783-40-6P,  
Magnesium difluoride 14953-28-7P, Magnesium fluoride (MgF)  
210641-06-8P  
(formation of Grignard species from reaction of Me halides with  
laser-ablated magnesium atoms)

RN 420-09-7 HCA

CN Magnesium, fluoromethyl- (8CI, 9CI) (CA INDEX NAME)



RN 7783-40-6 HCA

CN Magnesium fluoride (MgF<sub>2</sub>) (CA INDEX NAME)



RN 14953-28-7 HCA  
CN Magnesium fluoride (MgF) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

F—Mg

RN 210641-06-8 HCA  
CN Magnesium, (fluoromethyl)hydro- (9CI) (CA INDEX NAME)

F—CH<sub>2</sub>—MgH

CC 29-3 (Organometallic and Organometalloidal Compounds)  
IT 74-83-9, Methyl bromide, reactions 74-87-3, Methyl chloride,  
reactions 74-88-4, Methyl iodide, reactions 558-21-4  
593-53-3, Methyl fluoride 1111-88-2 7439-95-4,  
Magnesium, reactions 20666-44-8  
(formation of Grignard species from reaction of Me halides with  
laser-ablated magnesium atoms)  
IT 75-16-1P, Methylmagnesium bromide 420-09-7P,  
Methylmagnesium fluoride 676-58-4P, Methylmagnesium chloride  
917-64-6P, Methylmagnesium iodide 2999-74-8P, Dimethylmagnesium  
7783-40-6P, Magnesium difluoride 7786-30-3P, Magnesium  
dichloride, preparation 14953-28-7P, Magnesium fluoride  
(MgF) 14989-29-8P, Magnesium monochloride 25382-52-9P,  
Methylenemagnesium 63533-51-7P, Hydromethylmagnesium  
210641-06-8P 210641-11-5P  
(formation of Grignard species from reaction of Me halides with  
laser-ablated magnesium atoms)  
RE.CNT 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 5 OF 18 HCA COPYRIGHT 2008 ACS on STN  
AN 120:91462 HCA Full-text  
TI Vapor phase preparation of barium compound thin film from organic  
barium compound  
IN Sugawara, Shungo; Sato, Koji  
PA Nippon Telegraph & Telephone, Japan  
SO Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI JP 05208818	A	19930820	JP 1992-14816	
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199201  
30

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PRAI JP 1992-14816 19920130 <--

OS MARPAT 120:91462

AB The film is prep'd. by heat decomprn. of Ba complexes of diketone R1CSCH2COR2 (R1 = Me, CHMe2, CMe3; R2 = C1-8 fluoroalkyl). Ba-Zr or Ba-Y compd. thin film may be formed by adding Zr compd. or Y compd. to a vapor deposition material. HF may be used to form a BaF2 thin film. Ba Ti oxide dielec. film or Ba Y Cu oxide superconductor thin film may be prep'd. in the method.

IT 7783-64-4, Zirconium fluoride (ZrF4)  
(barium fluoride glass film contg., vapor phase prepn. of)

RN 7783-64-4 HCA

CN Zirconium fluoride (ZrF4), (T-4)- (CA INDEX NAME)



IT 7787-32-8P, Barium fluoride  
(prepn. of, film, vapor phase, from barium compd.)

RN 7787-32-8 HCA

CN Barium fluoride (BaF2) (CA INDEX NAME)



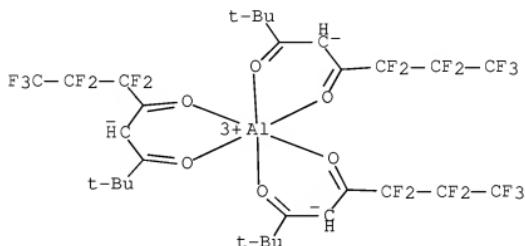
IT 7664-39-3, Hydrofluoric acid, properties  
18716-26-2 19186-73-3 19530-02-0,  
Tetrakis(hexafluoroacetylacetato)zirconium  
(vapor deposition source, with barium compd., functional film  
from)

RN 7664-39-3 HCA

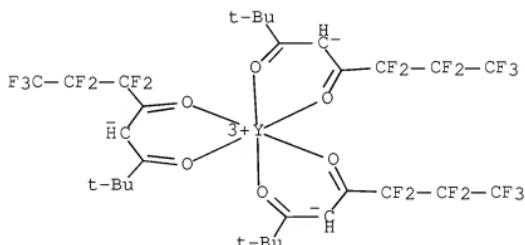
CN Hydrofluoric acid (CA INDEX NAME)

HF

RN 18716-26-2 HCA  
CN Aluminum, tris(6,6,7,7,8,8,8-heptafluoro-2,2-dimethyl-3,5-octanedionato- $\kappa$ O, $\kappa$ O')- (9CI) (CA INDEX NAME)

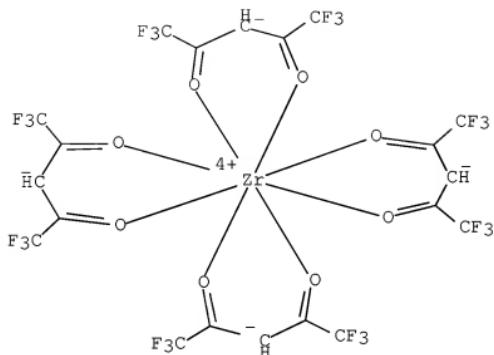


RN 19186-73-3 HCA  
CN Yttrium, tris(6,6,7,7,8,8,8-heptafluoro-2,2-dimethyl-3,5-octanedionato- $\kappa$ O, $\kappa$ O')- (9CI) (CA INDEX NAME)



RN 19530-02-0 HCA  
CN Zirconium, tetrakis(1,1,1,5,5-hexafluoro-2,4-pentanedionato-

$\kappa O, \kappa O')$ -, (SA-8-11'1'1''1'''11''')- (9CI) (CA INDEX  
NAME)

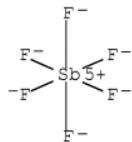


- IC ICM C01G025-00  
ICS C01G023-00; G02B006-00
- CC 75-1 (Crystallography and Liquid Crystals)  
Section cross-reference(s): 57, 76
- IT 7703-64-4, Zirconium fluoride (ZrF<sub>4</sub>)  
(barium fluoride glass film contg., vapor phase prepn. of)  
IT 7787-32-8P, Barium fluoride 12047-27-7P, Barium titanate,  
preparation 65107-47-3P, Barium copper lanthanum oxide  
107539-20-8P, Barium copper yttrium oxide  
(prepn. of, film, vapor phase, from barium compd.)
- IT 546-68-9, Titanium tetraisopropoxide 7664-39-3,  
Hydrofluoric acid, properties 14040-05-2,  
Bis(dipivaloylmethanato)copper 14319-13-2,  
Tris(dipivaloylmethanato)lanthanum 13716-26-2  
19186-73-3 19530-02-0,  
Tetrakis(hexafluoroacetylacetonato)zirconium 22466-49-5  
121012-90-6, Bis(hexafluoroacetylacetonato)calcium  
(vapor deposition source, with barium compd., functional film  
from)
- L47 ANSWER 6 OF 18 HCA COPYRIGHT 2008 ACS on STN  
AN 118:115581 HCA Full-text  
TI Synthesis and characterization of chlorofluoroantimonates(V)  
AU Dove, Michael F. A.; Sanders, Jeremy C. P.

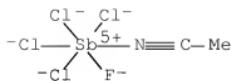
CS Dep. Chem., Univ. Nottingham, Nottingham, NG7 2RD, UK  
 SO Journal of the Chemical Society, Dalton Transactions: Inorganic  
 Chemistry (1972-1999) (1992), (23), 3311-16  
 CODEN: JCDTBI; ISSN: 0300-9246  
 DT Journal  
 LA English  
 AB Five of the 8 possible SbCl<sub>16-x</sub>F<sub>x</sub><sup>-</sup> (x = 1-5) were characterized in soln. by <sup>121</sup>Sb and <sup>19</sup>F NMR spectroscopy; of these 3 were isolated in ≥90% purity as their tetraalkylammonium salts and their IR and Raman spectra are assigned. None of the 3 trans isomers were detected either in soln. or in the solid state. Factors influencing the appearance of the <sup>121</sup>Sb NMR spectra of octahedral SbCl<sub>16-x</sub>F<sub>x</sub><sup>-</sup> are discussed. The solvolysis of SbCl<sub>6</sub><sup>-</sup> by anhyd. HF is irreversible and generates all possible stoichiometries of SbCl<sub>16-x</sub>F<sub>x</sub><sup>-</sup> in succession.  
 IT 7783-56-4, Antimony trifluoride  
     (chlorination of tetraethylammonium chloride mixed with)  
 RN 7783-56-4 HCA  
 CN Stibine, trifluoro- (CA INDEX NAME)



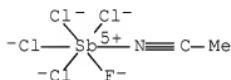
IT 17111-95-4P, Hexafluoroantimonate(1-)  
     (formation and antimony-121 and fluorine-19 NMR of)  
 RN 17111-95-4 HCA  
 CN Antimonate(1-), hexafluoro-, (OC-6-11)- (CA INDEX NAME)



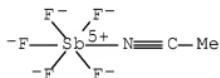
IT 58375-77-2P 58407-52-6P  
     (prepn. of)  
 RN 58375-77-2 HCA  
 CN Antimony, (acetonitrile)tetrachlorofluoro-, (OC-6-11)- (CA INDEX  
     NAME)



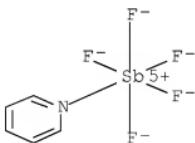
RN 58407-52-6 HCA  
 CN Antimony, (acetonitrile)tetrachlorofluoro-, (OC-6-32)- (CA INDEX NAME)



IT 19106-78-6, (Acetonitrile)pentafluoroantimony  
 93543-48-7  
     (reaction of, with tetraethylammonium chloride)  
 RN 19106-78-6 HCA  
 CN Antimony, (acetonitrile)pentafluoro-, (OC-6-21)- (CA INDEX NAME)



RN 93543-48-7 HCA  
 CN Antimony, pentafluoro(pyridine)-, (OC-6-21)- (CA INDEX NAME)



IT 7664-39-3, Hydrofluoric acid, reactions  
(solvolysis by, of hexachloroantimonate salts)  
RN 7664-39-3 HCA  
CN Hydrofluoric acid (CA INDEX NAME)

HF

CC 78-7 (Inorganic Chemicals and Reactions)  
Section cross-reference(s): 77  
IT Solvolysis  
(of chloroantimonate(V) in hydrofluoric acid)  
IT 7783-56-4, Antimony trifluoride  
(chlorination of tetraethylammonium chloride mixed with)  
IT 17111-95-4P, Hexafluoroantimonate(1-) 44479-94-9P  
61061-85-6P, cis-Tetrachlorodifluoroantimonate(1-)  
(formation and antimony-121 and fluorine-19 NMR of)  
IT 16871-78-6P  
(prepn. and solvolysis in hydrofluoric acid  
and reaction of, with fluoro analog)  
IT 58375-77-2P 58407-52-6P  
(prepn. of)  
IT 14913-58-7, Antimony chloride fluoride (SbCl<sub>4</sub>F) 19106-73-6  
, (Acetonitrile)pentafluoroantimony 93543-48-7  
(reaction of, with tetraethylammonium chloride)  
IT 7664-39-3, Hydrofluoric acid, reactions  
(solvolysis by, of hexachloroantimonate salts)  
IT 55831-70-4  
(solvolysis of, in hydrofluoric acid)

L47 ANSWER 7 OF 18 HCA COPYRIGHT 2008 ACS on STN

AN 111:238376 HCA Full-text

TI Manufacture of fluoride glass and fluoride glass optical fiber  
preforms

IN Fujiura, Kazuo; Ohishi, Yasutake; Fujiki, Michiya; Kanamori,  
Terutoshi; Takahashi, Shiro

PA Nippon Telegraph and Telephone Corp., Japan

SO Eur. Pat. Appl., 22 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

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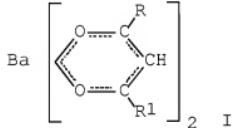
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PI	EP 331483	A2	19890906	EP 1989-302073	
					198903 02
				<--	
	EP 331483	A3	19900816		
	EP 331483	B1	19930512		
	R: FR, GB				
	JP 02275726	A	19901109	JP 1989-49277	
					198903 01
				<--	
	US 5071460	A	19911210	US 1989-317679	
					198903 01
				<--	
	US 5145508	A	19920908	US 1991-684070	
					199103 11
				<--	
PRAI	JP 1988-49797	A	19880304	<--	
	JP 1988-276007	A	19881102	<--	
	JP 1989-16403	A	19890127	<--	
	JP 1989-49277	A	19890301	<--	
	US 1989-317679	A1	19890301	<--	
OS	MARPAT 111:238376				
GI					



AB In the title process, comprising introducing a gaseous mixt. into a reaction system contg. a substrate and reacting the ingredients in the gaseous phase or on the substrate to deposite a metal fluoride and forming the fluoride glass, the gaseous mixts. contain a Ba  $\beta$ -diketonate I serving as a 1st starting material (R = C1-7-alkyl; R1 = substituted alkyl having general formula  $C_nF_{2n+1}$ ; n = 1-3), a gaseous or vaporizable compd. of the metallic element constituting the

fluoride glass and serving as the 2nd starting material, and optionally, a F-contg. gas serving as the fluorinating agent. The rod-shaped substrates, comprising a coating of finely divided fluoride glass, are heated to form the optical fiber preforms. The resulting fluoride glass is highly homogeneous and is useful for the manuf. of laser glass, coatings, lenses, and long optical fibers having low transmission loss. Thus, using vaporized hexafluoroacetylacetone Zr complex at 100 mL/min and 2,2-dimethyl-6,6,7,7,8,8-heptafluoro-3,5-octanedione Ba complex at 50 mL/min and HF(g), fluoride glass having compn. 65ZrF<sub>4</sub>-35BaF<sub>2</sub> was deposited at 205° and 10 mm Hg. The glass had glass transition temp. 270 and crystn. temp. 330°.

IT 7664-39-3, Hydrogen fluoride, uses and  
miscellaneous  
(fluorinating agent, in optical fiber preform manuf.)  
RN 7664-39-3 HCA  
CN Hydrofluoric acid (CA INDEX NAME)

HF

IT 7782-64-1P, Manganese fluoride (MnF<sub>2</sub>) 7783-46-2P,  
Lead fluoride (PbF<sub>2</sub>) 7783-49-5P, Zinc fluoride (ZnF<sub>2</sub>)  
7783-52-6P, Indium fluoride (InF<sub>3</sub>) 7783-56-4P  
7783-63-3P 7783-64-4P, Zirconium fluoride (ZrF<sub>4</sub>)  
7783-68-8P 7783-71-3P, Tantalum fluoride (TaF<sub>5</sub>)  
7784-18-1P, Aluminum fluoride (AlF<sub>3</sub>) 15978-96-8P  
55128-73-9P, Tin fluoride 113016-54-9P, Molybdenum  
fluoride 7681-49-4P, Sodium fluoride (NaF), uses and  
miscellaneous 7758-88-5P, Cerium fluoride (CeF<sub>3</sub>)  
7789-24-4P, Lithium fluoride (LiF), uses and miscellaneous  
7789-75-6P, Calcium fluoride (CaF<sub>2</sub>), uses and miscellaneous  
7790-79-6P, Cadmium fluoride (CdF<sub>2</sub>) 13569-80-7P,  
Dysprosium fluoride (DyF<sub>3</sub>) 13708-63-9P, Terbium fluoride  
(TbF<sub>3</sub>) 13709-38-1P, Lanthanum fluoride (LaF<sub>3</sub>)  
13709-42-7P, Neodymium fluoride (NdF<sub>3</sub>) 13709-45-0P  
, Promethium fluoride (PmF<sub>3</sub>) 13709-46-1P, Praseodymium  
fluoride (PrF<sub>3</sub>) 13709-49-4P, Yttrium fluoride (YF<sub>3</sub>)  
13709-52-9P, Hafnium fluoride (HfF<sub>4</sub>) 13709-59-6P  
13760-78-6P, Holmium fluoride (HoF<sub>3</sub>) 13760-79-7P,  
Thulium fluoride (TmF<sub>3</sub>) 13760-80-0P, Ytterbium fluoride  
(YbF<sub>3</sub>) 13760-81-1P, Lutetium fluoride (LuF<sub>3</sub>)  
13760-83-3P, Erbium fluoride (ErF<sub>3</sub>) 13765-24-7P,  
Samarium fluoride (SmF<sub>3</sub>) 13765-25-8P, Europium fluoride  
(EuF<sub>3</sub>) 13765-26-9P, Gadolinium fluoride (GdF<sub>3</sub>)

(glass, optical, barium fluoride, fluorine-substituted  
β-diketone barium complexes in manuf. of)

RN 7782-64-1 HCA

CN Manganese fluoride (MnF<sub>2</sub>) (CA INDEX NAME)



RN 7783-46-2 HCA

CN Lead fluoride (PbF<sub>2</sub>) (CA INDEX NAME)



RN 7783-49-5 HCA

CN Zinc fluoride (ZnF<sub>2</sub>) (CA INDEX NAME)



RN 7783-52-0 HCA

CN Indium fluoride (InF<sub>3</sub>) (CA INDEX NAME)



RN 7783-56-4 HCA

CN Stibine, trifluoro- (CA INDEX NAME)



RN 7783-63-3 HCA

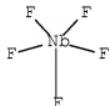
CN Titanium fluoride (TiF<sub>4</sub>), (T-4)- (9CI) (CA INDEX NAME)



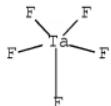
RN 7783-64-4 HCA  
CN Zirconium fluoride ( $\text{ZrF}_4$ ), (T-4)- (CA INDEX NAME)



RN 7783-68-8 HCA  
CN Niobium fluoride ( $\text{NbF}_5$ ), (TB-5-11)- (CA INDEX NAME)



RN 7783-71-3 HCA  
CN Tantalum fluoride ( $\text{TaF}_5$ ) (CA INDEX NAME)



RN 7784-18-1 HCA  
CN Aluminum fluoride ( $\text{AlF}_3$ ) (CA INDEX NAME)



RN 15978-96-8 HCA  
CN Bismuth(1+), difluoro- (9CI) (CA INDEX NAME)



RN 55128-73-9 HCA  
CN Tin fluoride (CA INDEX NAME)

Component	Ratio	Component	
		Registry Number	
F	x	14762-94-8	
Sn	x	7440-31-5	

RN 113016-54-9 HCA  
CN Molybdenum fluoride (CA INDEX NAME)

Component	Ratio	Component	
		Registry Number	
F	x	14762-94-8	
Mo	x	7439-98-7	

RN 7681-49-4 HCA  
CN Sodium fluoride (NaF) (CA INDEX NAME)



RN 7758-88-5 HCA  
CN Cerium fluoride (CeF<sub>3</sub>) (CA INDEX NAME)



RN 7789-24-4 HCA  
CN Lithium fluoride (LiF) (CA INDEX NAME)

F—Li

RN 7789-75-5 HCA  
CN Calcium fluoride (CaF<sub>2</sub>) (CA INDEX NAME)

F—Ca—F

RN 7790-79-6 HCA  
CN Cadmium fluoride (CdF<sub>2</sub>) (CA INDEX NAME)

F—Cd—F

RN 13569-80-7 HCA  
CN Dysprosium fluoride (DyF<sub>3</sub>) (CA INDEX NAME)

F  
|  
F—Dy—F

RN 13708-63-9 HCA  
CN Terbium fluoride (TbF<sub>3</sub>) (CA INDEX NAME)

F  
|  
F—Tb—F

RN 13709-38-1 HCA  
CN Lanthanum fluoride (LaF<sub>3</sub>) (CA INDEX NAME)



RN 13709-42-7 HCA  
CN Neodymium fluoride (NdF<sub>3</sub>) (CA INDEX NAME)



RN 13709-45-0 HCA  
CN Promethium fluoride (PmF<sub>3</sub>) (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 13709-46-1 HCA  
CN Praseodymium fluoride (PrF<sub>3</sub>) (CA INDEX NAME)



RN 13709-49-4 HCA  
CN Yttrium fluoride (YF<sub>3</sub>) (CA INDEX NAME)



RN 13709-52-9 HCA  
CN Hafnium fluoride (HfF<sub>4</sub>), (T-4)- (CA INDEX NAME)



RN 13709-59-6 HCA  
CN Thorium fluoride (ThF<sub>4</sub>), (T-4)- (CA INDEX NAME)



RN 13760-78-6 HCA  
CN Holmium fluoride (HoF<sub>3</sub>) (CA INDEX NAME)



RN 13760-79-7 HCA  
CN Thulium fluoride (TmF<sub>3</sub>) (CA INDEX NAME)



RN 13760-80-0 HCA  
CN Ytterbium fluoride (YbF<sub>3</sub>) (CA INDEX NAME)



RN 13760-81-1 HCA  
CN Lutetium fluoride (LuF<sub>3</sub>) (CA INDEX NAME)



RN 13760-83-3 HCA  
CN Erbium fluoride (ErF<sub>3</sub>) (CA INDEX NAME)



RN 13765-24-7 HCA  
CN Samarium fluoride (SmF<sub>3</sub>) (CA INDEX NAME)



RN 13765-25-8 HCA  
CN Europium fluoride (EuF<sub>3</sub>) (CA INDEX NAME)



RN 13765-26-9 HCA  
CN Gadolinium fluoride (GdF<sub>3</sub>) (CA INDEX NAME)



IT 7787-32-8P, Barium fluoride (BaF<sub>2</sub>)  
(glass, optical, fluorine-substituted  $\beta$ -diketone barium  
complexes in manuf. of)  
RN 7787-32-8 HCA

CN Barium fluoride (BaF<sub>2</sub>) (CA INDEX NAME)

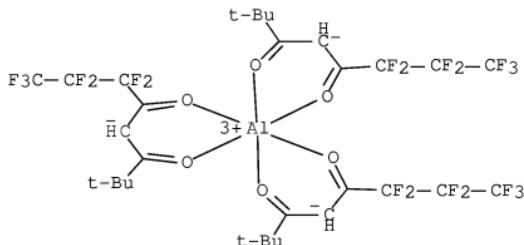
F—Ba—F

IT 18716-26-2 19106-89-9 19136-73-3  
19530-02-0 22413-70-3

(vapors contg. fluorine-substituted  $\beta$ -diketone barium complexes and, in optical fluoride glass manuf. by chem.-vapor deposition)

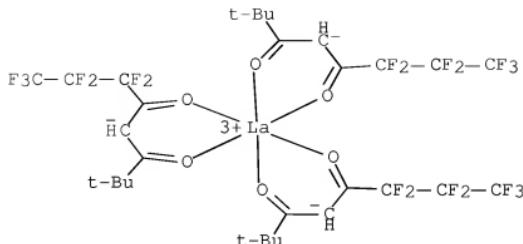
RN 18716-26-2 HCA

CN Aluminum, tris(6,6,7,7,8,8,8-heptafluoro-2,2-dimethyl-3,5-octanedionato- $\kappa O$ , $\kappa O'$ )- (9CI) (CA INDEX NAME)



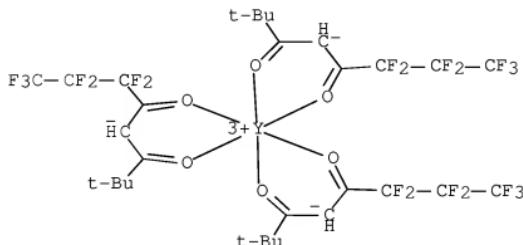
RN 19106-89-9 HCA

CN Lanthanum, tris(6,6,7,7,8,8,8-heptafluoro-2,2-dimethyl-3,5-octanedionato- $\kappa O$ , $\kappa O'$ )- (9CI) (CA INDEX NAME)



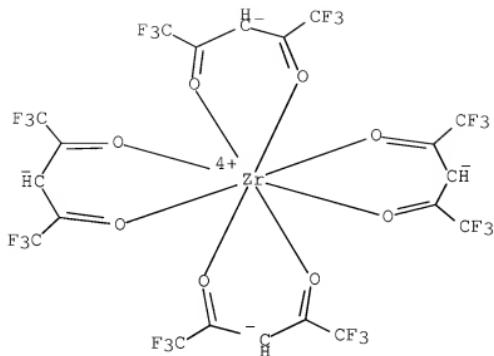
RN 19186-73-3 HCA

CN Yttrium, tris(6,6,7,7,8,8,8-heptafluoro-2,2-dimethyl-3,5-octanedionato- $\kappa O,\kappa O'$ )- (9CI) (CA INDEX NAME)

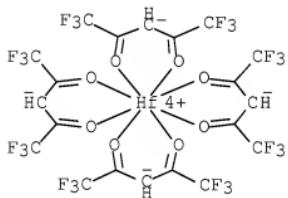


RN 19530-02-0 HCA

CN Zirconium, tetrakis(1,1,1,5,5,5-hexafluoro-2,4-pentanedionato- $\kappa O,\kappa O'$ )-, (SA-8-11'1'1''1'''1''''11''')- (9CI) (CA INDEX NAME)



RN 22413-70-3 HCA  
 CN Hafnium, tetrakis(1,1,1,5,5-hexafluoro-2,4-pentanedionato-O,O')-  
 (9CI) (CA INDEX NAME)



IC ICM C03C001-00  
 ICS C03C013-04; C03C003-32; C03B037-018  
 CC 57-1 (Ceramics)  
 IT 7664-39-3, Hydrogen fluoride, uses and  
 miscellaneous 7782-41-4, Fluorine, uses and miscellaneous  
 (fluorinating agent, in optical fiber preform manuf.)  
 IT 7782-64-1P, Manganese fluoride (MnF<sub>2</sub>) 7783-46-2P,  
 Lead fluoride (PbF<sub>2</sub>) 7783-49-5P, Zinc fluoride (ZnF<sub>2</sub>)  
 7783-52-0P, Indium fluoride (InF<sub>3</sub>) 7783-56-4P  
 7783-63-3P 7783-64-4P, Zirconium fluoride (ZrF<sub>4</sub>)

7783-68-8P 7783-71-3P, Tantalum fluoride (TaF<sub>5</sub>)  
7784-18-1P, Aluminum fluoride (AlF<sub>3</sub>) 15973-96-8P  
55128-73-9P, Tin fluoride 113016-54-9P, Molybdenum  
fluoride 7681-49-4P, Sodium fluoride (NaF), uses and  
miscellaneous 7758-83-5P, Cerium fluoride (CeF<sub>3</sub>)  
7789-24-4P, Lithium fluoride (LiF), uses and miscellaneous  
7789-75-5P, Calcium fluoride (CaF<sub>2</sub>), uses and miscellaneous  
7790-73-6P, Cadmium fluoride (CdF<sub>2</sub>) 13569-80-7P,  
Dysprosium fluoride (DyF<sub>3</sub>) 13708-63-9P, Terbium fluoride  
(TbF<sub>3</sub>) 13709-38-1P, Lanthanum fluoride (LaF<sub>3</sub>)  
13709-42-7P, Neodymium fluoride (NdF<sub>3</sub>) 13709-45-0P  
, Promethium fluoride (PmF<sub>3</sub>) 13709-46-1P, Praseodymium  
fluoride (PrF<sub>3</sub>) 13709-49-4P, Yttrium fluoride (YF<sub>3</sub>)  
13709-52-9P, Hafnium fluoride (HfF<sub>4</sub>) 13709-59-6P  
13760-78-6P, Holmium fluoride (HoF<sub>3</sub>) 13760-79-7P,  
Thulium fluoride (TmF<sub>3</sub>) 13760-80-0P, Ytterbium fluoride  
(YbF<sub>3</sub>) 13760-81-1P, Lutetium fluoride (LuF<sub>3</sub>)  
13760-83-3P, Erbium fluoride (ErF<sub>3</sub>) 13765-24-7P,  
Samarium fluoride (SmF<sub>3</sub>) 13765-25-8P, Europium fluoride  
(EuF<sub>3</sub>) 13765-26-9P, Gadolinium fluoride (GdF<sub>3</sub>)  
(glass, optical, barium fluoride, fluorine-substituted  
 $\beta$ -diketone barium complexes in manuf. of)

IT 7787-32-8P, Barium fluoride (BaF<sub>2</sub>)  
(glass, optical, fluorine-substituted  $\beta$ -diketone barium  
complexes in manuf. of)  
IT 1522-22-1D, metal complexes 13777-25-8 18716-26-2  
19106-89-9 19186-73-3 19530-02-0  
22413-70-3 22441-13-0 22466-43-9 24347-13-5  
124053-49-2  
(vapors contg. fluorine-substituted  $\beta$ -diketone barium  
complexes and, in optical fluoride glass manuf. by chem.-vapor  
deposition)

L47 ANSWER 8 OF 18 HCA COPYRIGHT 2008 ACS on STN

AN 108:160332 HCA Full-text

OREF 108:26177a, 26180a

TI Preparation of the hexafluorotungstates(V) (NaWF<sub>6</sub> and  
[Cd(CH<sub>3</sub>CN)<sub>6</sub>]WF<sub>6</sub>)<sub>2</sub>)

AU Brueckner, Angelika; Vogt, Hartmut; Riesel, Lothar

CS Sekt. Chem., Humboldt-Univ. Berlin, Berlin, DDR-1040, Ger. Dem. Rep.

SO Zeitschrift fuer Chemie (1987), 27(11), 415-16

CODEN: ZECEAL; ISSN: 0044-2402

DT Journal

LA German

AB WF<sub>6</sub> reacted with NaI in a Ni autoclave at 80° to give NaWF<sub>6</sub> which is cubic, isotropic with NaMoF<sub>6</sub> with a0 818.1 pm. WF<sub>6</sub> reacted with Cd(CF<sub>3</sub>)<sub>2</sub>.2MeCN in MeCN at 50° to give [Cd(MeCN)<sub>6</sub>]WF<sub>6</sub>)<sub>2</sub> (I). In this

latter reaction CF<sub>3</sub> radicals were formed which abstracted H from MeCN to give CHF<sub>3</sub>. CdF<sub>2</sub> was also formed as a result of the reaction of CF<sub>2</sub> (formed in the decompn. of Cd(CF<sub>3</sub>)<sub>2</sub>.2MeCN) and CF<sub>3</sub> radicals with SiO<sub>2</sub> walls. I was characterized by IR spectra.

IT 7790-79-6P, Cadmium difluoride  
(formation of, from cadmium trifluoromethyl acetonitrile complex and tungsten hexafluoride)

RN 7790-79-6 HCA

CN Cadmium fluoride (CdF<sub>2</sub>) (CA INDEX NAME)



IT 75-46-7P, Trifluoromethane  
(formation of, in reaction of cadmium trifluoromethyl acetonitrile complex with tungsten hexafluoride in acetonitrile)

RN 75-46-7 HCA

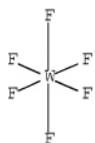
CN Methane, trifluoro- (CA INDEX NAME)



IT 7783-82-6, Tungsten hexafluoride  
(reaction of, with sodium iodide and cadmium trifluoromethyl acetonitrile complex)

RN 7783-82-6 HCA

CN Tungsten fluoride (WF<sub>6</sub>), (OC-6-11)- (CA INDEX NAME)

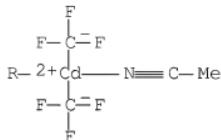


IT 93346-82-8  
(reaction of, with tungsten hexafluoride)

RN 93346-82-8 HCA

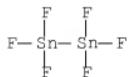
CN Cadmium, bis(acetonitrile)bis(trifluoromethyl)-, (T-4)- (CA INDEX

NAME)



- CC 78-7 (Inorganic Chemicals and Reactions)  
Section cross-reference(s): 75  
IT 7790-79-6P, Cadmium difluoride  
(formation of, from cadmium trifluoromethyl acetonitrile complex  
and tungsten hexafluoride)  
IT 75-46-7P, Trifluoromethane  
(formation of, in reaction of cadmium trifluoromethyl  
acetonitrile complex with tungsten hexafluoride in acetonitrile)  
IT 7733-82-6, Tungsten hexafluoride  
(reaction of, with sodium iodide and cadmium trifluoromethyl  
acetonitrile complex)  
IT 93346-82-3  
(reaction of, with tungsten hexafluoride)
- L47 ANSWER 9 OF 18 HCA COPYRIGHT 2008 ACS on STN  
AN 105:17024 HCA Full-text  
OREF 105:2713a, 2716a  
TI The reaction of hexaphenylditin with inorganic acids: new mixed  
oxidation state compounds of tin  
AU Birchall, T.; Johnson, J. P.; Manivannan, V.  
CS Inst. Mater. Res., McMaster Univ., Hamilton, ON, L8S 4M1, Can.  
SO Hyperfine Interactions (1986), 28(1-4), 685-8  
CODEN: HYINDN; ISSN: 0304-3843  
DT Journal  
LA English  
AB The solvolysis of  $Sn_2Ph_6$  by a variety of inorg. acids ( $XH = HSO_3Z$  ( $Z = OH, Me, Et, CF_3, F$ ),  $HF$ ) gave  $SnX_3$ .  $Sn-119$  Moessbauer spectroscopy  
shows that these compds. should be formulated as  $Sn(II)Sn(IV)X_6$ : in  
some of these compds. the nonbonding electron pair of the  $Sn(II)$  is  
stereochem. inactive.  
IT 56039-53-3P 102856-92-8P  
(prepn. and Moessbauer spectrum of)

RN 56089-53-3 HCA  
CN Distannane, hexafluoro- (9CI) (CA INDEX NAME)

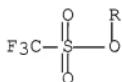
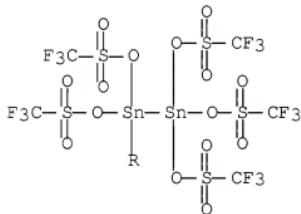


RN 102856-92-8 HCA  
CN Tin, difluorohexakis(trifluoromethanesulfonato)tri- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 102606-73-5P  
(prepn., Moessbauer spectrum and reaction of, with stannous fluoride)

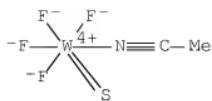
RN 102606-73-5 HCA  
CN 3,6-Dioxa-2,7-dithia-4,5-distannaoctane, 1,1,1,8,8,8-hexafluoro-4,4,5,5-tetrakis[[(trifluoromethyl)sulfonyl]oxy]-, 2,2,7,7-tetraoxide (9CI) (CA INDEX NAME)



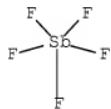
IT 7664-39-3, reactions  
(solvolyisis by, of hexaphenylditin, mixed valence salt by)  
RN 7664-39-3 HCA  
CN Hydrofluoric acid (CA INDEX NAME)

HF

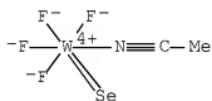
CC 78-5 (Inorganic Chemicals and Reactions)  
Section cross-reference(s): 29  
IT 56089-53-3P 102606-69-9P 102606-70-2P 102606-71-3P  
102606-72-4P 102856-92-8P  
(prepn. and Moessbauer spectrum of)  
IT 102606-73-5P  
(prepn., Moessbauer spectrum and reaction of, with stannous  
fluoride)  
IT 75-75-2 594-45-6 1493-13-6 7664-39-3, reactions  
7664-93-9, reactions 7789-21-1  
(solvolysis by, of hexaphenylditin, mixed valence salt by)  
  
L47 ANSWER 10 OF 18 HCA COPYRIGHT 2008 ACS on STN  
AN 100:60845 HCA Full-text  
OREF 100:9161a,9164a  
TI Synthesis, chemistry, and crystal structures of high-valent  
transition-metal chalcogenide fluorides and their derivatives  
AU Holloway, John H.; Kaucic, Venceslav; Russell, David R.  
CS Dep. Chem., Univ. Leicester, Leicester, LE1 7RH, UK  
SO Journal of the Chemical Society, Chemical Communications (1983), (19), 1079-81  
CODEN: JCCCAT; ISSN: 0022-4936  
DT Journal  
LA English  
AB Reaction of S with WF<sub>6</sub> and ReF<sub>6</sub>, and Se with WF<sub>6</sub> at 300° for 20 h  
gave WF<sub>4</sub>S (I), ReF<sub>4</sub>S (II), and WF<sub>4</sub>Se (III), resp. Hydrolysis of III  
gave HF and H<sub>2</sub>Se. With MeCN, I and III gave WF<sub>4</sub>S.MeCN (IV) and  
WF<sub>4</sub>Se.MeCN, and reaction of I with SbF<sub>5</sub> at 30-40° gave WF<sub>4</sub>S.SbF<sub>5</sub>.  
The crystal structures of I, II, and IV were detd.; the results were  
refined to R = 0.0738 for 598 reflections, R = 0.0500 for 1646  
reflections, and R = 0.10 for 346 reflections, resp.  
IT 88586-71-4P  
(prepn. and structure of)  
RN 88586-71-4 HCA  
CN Tungsten, (acetonitrile)tetrafluorothioxo-, (OC-6-11)- (CA INDEX  
NAME)



IT 7783-70-2DP, reaction products with tungsten tetrafluoride  
 sulfide 88586-72-5P  
 (prepn. of)  
 RN 7783-70-2 HCA  
 CN Antimony fluoride ( $\text{SbF}_5$ ) (CA INDEX NAME)



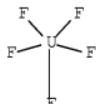
RN 88586-72-5 HCA  
 CN Tungsten, (acetonitrile)tetrafluoroselenoxo- (CA INDEX NAME)



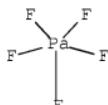
CC 78-7 (Inorganic Chemicals and Reactions)  
 Section cross-reference(s): 75  
 IT 41831-80-5P 82271-42-9P 88586-71-4P  
 (prepn. and structure of)  
 IT 7783-70-2DP, reaction products with tungsten tetrafluoride  
 sulfide 41831-80-5DP, reaction products with antimony  
 pentafluoride 88586-72-5P  
 (prepn. of)

L47 ANSWER 11 OF 18 HCA COPYRIGHT 2008 ACS on STN  
 AN 97:228974 HCA [Full-text](#)  
 OREF 97:38179a, 38182a

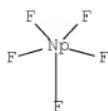
TI The preparation and some properties of actinide pentafluorides  
 AU Brown, David; Whittaker, Brian; Berry, John A.; Holloway, John H.  
 CS Chem. Div., At. Energy Res. Establ., Harwell/Oxon., OX11 0RA, UK  
 SO Journal of the Less-Common Metals (1982), 86(1), 75-84  
 CODEN: JCOMAH; ISSN: 0022-5088  
 DT Journal  
 LA English  
 AB PaF<sub>5</sub> and NpF<sub>5</sub> were prepd. by new methods and some of their phys. and chem. properties were studied to allow comparison with information available for UF<sub>5</sub>. In contrast to UF<sub>5</sub>, which is very sol. in MeCN, PaF<sub>5</sub> forms a sparingly sol. complex whereas NpF<sub>5</sub> neither dissolves nor reacts. The adduct PaF<sub>5</sub>.2 Ph<sub>3</sub>PO crystallizes on addn. of Ph<sub>3</sub>PO to PaF<sub>5</sub> in MeCN and is isostructural with the U analog; NpF<sub>5</sub> again fails to form a complex. Unlike UF<sub>5</sub>, NpF<sub>5</sub> does not undergo halogen exchange with Me<sub>3</sub>SiCl in MeCN or with liq. BC<sub>13</sub>. Preliminary studies of possible routes to PuF<sub>5</sub> showed that KrF<sub>2</sub> oxidn. of PuF<sub>3</sub> in anhyd. HF yields PuF<sub>4</sub> at room temp.  
 IT 13775-07-0  
     (crystal structure of)  
 RN 13775-07-0 HCA  
 CN Uranium fluoride (UF<sub>5</sub>) (CA INDEX NAME)



IT 15192-29-7P 31479-18-2P  
     (prepn. and crystal structure of)  
 RN 15192-29-7 HCA  
 CN Protactinium fluoride (PaF<sub>5</sub>) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 31479-18-2 HCA  
 CN Neptunium fluoride (NpF<sub>5</sub>) (8CI, 9CI) (CA INDEX NAME)



IT 13709-56-3P 83779-09-3P 83789-64-4P  
 (prepns. of)

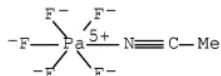
RN 13709-56-3 HCA

CN Plutonium fluoride (PuF<sub>4</sub>) (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 83779-09-3 HCA

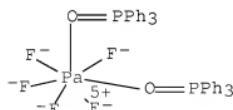
CN Protactinium, (acetonitrile)pentafluoro-, (OC-6-21)- (CA INDEX NAME)



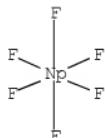
IT 14521-05-2

RN 83789-64-4 HCA

CN Protactinium, pentafluorobis(triphenylphosphine oxide-O)- (9CI) (CA INDEX NAME)



(reaction of, with iodine in presence of iodine pentafluoride)  
RN 14521-05-2 HCA  
CN Neptunium fluoride (NpF<sub>6</sub>), (OC-6-11)- (9CI) (CA INDEX NAME)



IT 13842-83-6  
(reaction of, with krypton difluoride)  
RN 13842-83-6 HCA  
CN Plutonium fluoride (PuF<sub>3</sub>) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



CC 78-5 (Inorganic Chemicals and Reactions)  
Section cross-reference(s): 75  
IT 13775-07-0  
(crystal structure of)  
IT 15192-29-7P 31479-18-2P  
(prepn. and crystal structure of)  
IT 13709-56-3P 83779-09-3P 83789-64-4P  
(prepn. of)  
IT 14521-05-2  
(reaction of, with iodine in presence of iodine pentafluoride)  
IT 13842-83-6  
(reaction of, with krypton difluoride)

L47 ANSWER 12 OF 18 HCA COPYRIGHT 2008 ACS on STN  
AN 82:9754 HCA Full-text

OREF 82:1521a,1524a

TI Fluorine-19 NMR study of the tantalum ethoxyfluoro complexes  
AU Buslaev, Yu. A.; Kokunov, Yu. V.; Kopanov, V. D.; Gustyakova, M. P.  
CS Inst. Gen. Inorg. Chem., Moscow, USSR  
SO Journal of Inorganic and Nuclear Chemistry (1974), 36(7),  
1569-74

CODEN: JINCAO; ISSN: 0022-1902

DT Journal

LA English

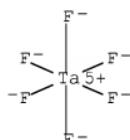
AB Complex formation in solns. of TaF<sub>5</sub>, TaF<sub>5</sub>-Ta(OEt)<sub>5</sub>, and Ta(OEt)<sub>5</sub>-HF in EtOH and MeCN was studied using <sup>19</sup>F NMR spectroscopy. Neutral, anionic, and cationic complexes were found. Only the cis isomer was obstd. for [TaF<sub>4</sub>(OEt)<sub>2</sub>]<sup>-</sup>, but in neutral and cationic complexes contg. 2 F atoms, both cis and trans isomers were present.

IT 16918-70-0P 53708-81-9P 53708-82-0P  
53708-83-1P 53708-84-2P 53708-85-3P  
53708-86-4P 53708-87-5P 53708-88-6P  
53708-89-7P 53730-30-6P 53730-31-7P  
53730-32-8P 53730-33-9P 53730-34-0P  
53797-14-1P 53829-77-9P

(formation and NMR of)

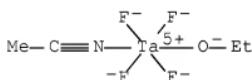
RN 16918-70-0 HCA

CN Tantalate(1-), hexafluoro-, (OC-6-11)- (CA INDEX NAME)



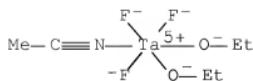
RN 53708-81-9 HCA

CN Tantalum, (acetonitrile)ethoxytetrafluoro-, (OC-6-11)- (CA INDEX NAME)

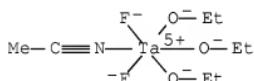


RN 53708-82-0 HCA

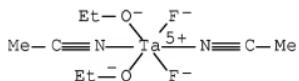
CN Tantalum, (acetonitrile)diethoxytrifluoro-, (OC-6-31)- (CA INDEX NAME)



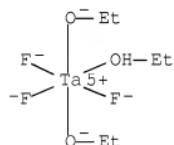
RN 53708-83-1 HCA  
 CN Tantalum, (acetonitrile)triethoxydifluoro-, (OC-6-13)- (CA INDEX NAME)



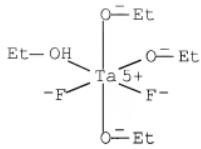
RN 53708-84-2 HCA  
 CN Tantalum(1+), bis(acetonitrile)diethoxydifluoro- (CA INDEX NAME)



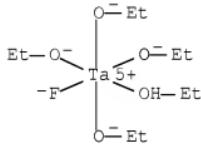
RN 53708-85-3 HCA  
 CN Tantalum, (ethanol)diethoxytrifluoro-, (OC-6-21)- (CA INDEX NAME)



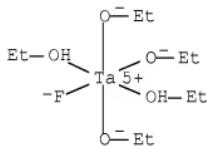
RN 53708-86-4 HCA  
 CN Tantalum, (ethanol)triethoxydifluoro-, (OC-6-13)- (CA INDEX NAME)



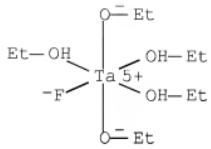
RN 53708-87-5 HCA  
 CN Tantalum, (ethanol)tetraethoxyfluoro- (CA INDEX NAME)



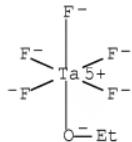
RN 53708-88-6 HCA  
 CN Tantalum(1+), bis(ethanol)triethoxyfluoro- (CA INDEX NAME)



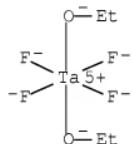
RN 53708-89-7 HCA  
 CN Tantalum(2+), tris(ethanol)diethoxyfluoro- (CA INDEX NAME)



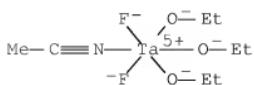
RN 53730-30-6 HCA  
 CN Tantalate(1-), ethoxypentafluoro-, (OC-6-21)- (CA INDEX NAME)



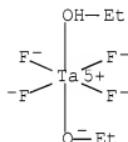
RN 53730-31-7 HCA  
 CN Tantalate(1-), diethoxytetrafluoro-, (OC-6-22)- (CA INDEX NAME)



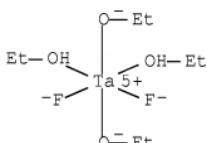
RN 53730-32-8 HCA  
 CN Tantalum, (acetonitrile)triethoxydifluoro-, (OC-6-22)- (CA INDEX NAME)



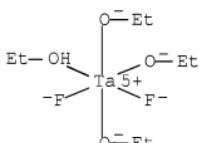
RN 53730-33-9 HCA  
CN Tantalum, (ethanol)ethoxytetrafluoro-, (OC-6-11)- (CA INDEX NAME)



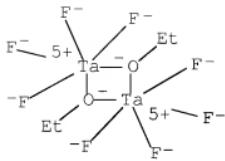
RN 53730-34-0 HCA  
CN Tantalum(1+), bis(ethanol)diethoxydifluoro- (CA INDEX NAME)



RN 53797-14-1 HCA  
CN Tantalum, (ethanol)triethoxydifluoro-, (OC-6-33)- (CA INDEX NAME)



RN 53829-77-9 HCA  
CN Tantalum, di- $\mu$ -ethoxyoctafluorodi- (CA INDEX NAME)



CC 73-4 (Spectra by Absorption, Emission, Reflection, or Magnetic Resonance, and Other Optical Properties)

Section cross-reference(s): 68

IT 16918-70-0P 53708-81-9P 53708-82-0P  
 53708-83-1P 53708-84-2P 53708-85-3P  
 53708-86-4P 53708-87-5P 53708-88-6P  
 53708-89-7P 53730-30-6P 53730-31-7P  
 53730-32-8P 53730-33-9P 53730-34-0P  
 53797-14-1P 53829-77-9P  
 (formation and NMR of)

L47 ANSWER 13 OF 18 HCA COPYRIGHT 2008 ACS on STN

AN 78:167967 HCA Full-text

OREF 78:26890h,26891a

TI Systematic preparation of carbonyl fluorides of molybdenum and tungsten using xenon difluoride as oxidant

AU O'Donnell, T. A.; Phillips, K. A.

CS Dep. Inorg. Chem., Univ. Melbourne, Parkville, Australia

SO Inorganic Chemistry (1973), 12(6), 1437-8

CODEN: INOCAJ; ISSN: 0020-1669

DT Journal

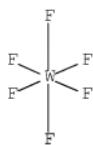
LA English

AB Mo(CO)4F2, prep'd. from Mo(CO)4Cl2 in HF, was oxidized by XeF2 to Mo(CO)3F3 and Mo(CO)2F4 which react further with XeF2 to give MoF6. Attempts to oxidize W(CO)4F2 to W(CO)3F3 and W(CO)2F4 led only to WF6 and WF5. The compns. of the Mo complexes were estd. by ir spectra.

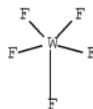
IT 7783-82-6P 19357-83-6P  
 (formation of, in oxidn. of difluorotetracarbonyltungsten)

RN 7783-82-6 HCA

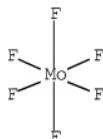
CN Tungsten fluoride (WF6), (OC-6-11)- (CA INDEX NAME)



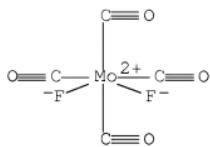
RN 19357-83-6 HCA  
 CN Tungsten fluoride (WF<sub>6</sub>) (8CI, 9CI) (CA INDEX NAME)



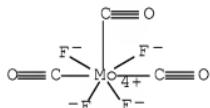
IT 7783-77-9P  
     (formation of, in oxidn. of tetracarbonyldifluoromolybdenum)  
 RN 7783-77-9 HCA  
 CN Molybdenum fluoride (MoF<sub>6</sub>), (OC-6-11)- (CA INDEX NAME)



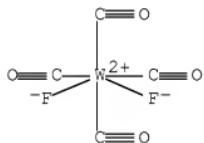
IT 38703-63-8P 38703-64-9P 38703-66-1P  
     38708-79-1P  
     (prepn. of)  
 RN 38703-63-8 HCA  
 CN Molybdenum, tetracarbonyldifluoro- (CA INDEX NAME)



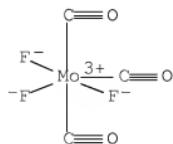
RN 38703-64-9 HCA  
 CN Molybdenum, tricarbonyltetrafluoro- (CA INDEX NAME)



RN 38703-66-1 HCA  
 CN Tungsten, tetracarbonyldifluoro- (CA INDEX NAME)

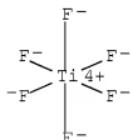


RN 38708-79-1 HCA  
 CN Molybdenum, tricarbonyltrifluoro- (CA INDEX NAME)



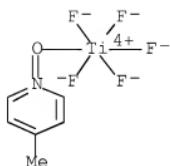
CC 78-7 (Inorganic Chemicals and Reactions)  
IT 7783-82-6P 14040-11-0P 19357-83-6P  
    (formation of, in oxidn. of difluorotetracarbonyltungsten)  
IT 7783-77-9P  
    (formation of, in oxidn. of tetracarbonyldifluoromolybdenum)  
IT 38703-63-8P 38703-64-9P 38703-66-1P  
38708-79-1P  
    (prepn. of)

L47 ANSWER 14 OF 18 HCA COPYRIGHT 2008 ACS on STN  
AN 68:35488 HCA Full-text  
OREF 68:6883a,6886a  
TI Hydrolysis of titanium tetrafluoride  
AU Buslaev, Yu. A.; Dyer, Daniel S.; Ragsdale, Ronald O.  
CS Univ. of Utah, Salt Lake City, UT, USA  
SO Inorganic Chemistry (1967), 6(12), 2208-12  
CODEN: INOCAJ; ISSN: 0020-1669  
DT Journal  
LA English  
AB The hydrolysis of TiF<sub>4</sub> in various solns. is described. In a 40% TiF<sub>4</sub> aq. soln. evidence is presented for the polynuclear species [TiF<sub>4</sub>.Ti(OH)<sub>4</sub>(H<sub>2</sub>O)<sub>2</sub>]. A <sup>19</sup>F study of the supernatant liquid from the hydrolysis of the adduct TiF<sub>4</sub>.2HC(O)NMe<sub>2</sub> showed the presence of TiF<sub>5</sub>.HC(O)NMe<sub>2</sub><sup>-</sup>, TiF<sub>5</sub>.H<sub>2</sub>O<sup>-</sup>, and TiF<sub>6</sub><sup>2-</sup>. The cis-TiF<sub>4</sub>.2H<sub>2</sub>O adduct was found as a product in dil. HF solns. of TiF<sub>4</sub> in water. TiF<sub>6</sub> is stable in water but hydrolyzes in acidic solns.  
IT 19200-76-1P  
    (formation of, in hydrolysis of titanium fluoride (TiF<sub>4</sub>))  
RN 19200-76-1 HCA  
CN Titanate(2-), hexafluoro-, (OC-6-11)- (CA INDEX NAME)

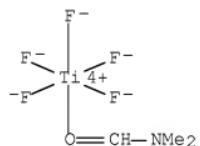


IT 19200-79-4P  
    (formation of, in hydrolysis of titanium fluoride (TiF<sub>4</sub>) in

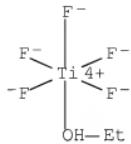
presence of 4-picoline 1-oxide)  
 RN 19200-79-4 HCA  
 CN Titanate(1-), pentafluoro(4-methylpyridine 1-oxide-O)-, (OC-6-21)-  
 (9CI) (CA INDEX NAME)



IT 19200-78-3P  
 (formation of, in hydrolysis of titanium fluoride ( $\text{TiF}_4$ ) in  
 presence of N,N-dimethylformamide)  
 RN 19200-78-3 HCA  
 CN Titanate(1-), (N,N-dimethylformamide-O)pentafluoro-, (OC-6-21)-  
 (9CI) (CA INDEX NAME)



IT 19200-77-2P  
 (formation of, in hydrolysis of titanium fluoride ( $\text{TiF}_4$ ) in  
 presence of ethyl alc.)  
 RN 19200-77-2 HCA  
 CN Titanate(1-), (ethyl alcohol)pentafluoro- (8CI) (CA INDEX NAME)



IT 7783-63-3 16894-18-1 21591-33-3  
     (hydrolysis of)

RN 7783-63-3 HCA

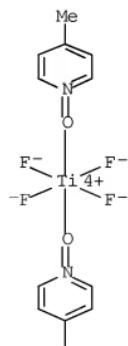
CN Titanium fluoride (TiF<sub>4</sub>), (T-4)- (9CI) (CA INDEX NAME)



RN 16894-18-1 HCA

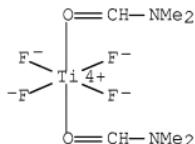
CN Titanium, tetrafluorobis(4-methylpyridine 1-oxide-O)- (9CI) (CA INDEX NAME)

PAGE 1-A



Me

RN 21591-33-3 HCA  
 CN Titanium, bis(N,N-dimethylformamide-O)tetrafluoro- (9CI) (CA INDEX  
 NAME)



- CC 78 (Inorganic Chemicals and Reactions)  
 IT 19200-76-1P 19412-96-5P 19457-80-8P  
     (formation of, in hydrolysis of titanium fluoride (TiF4))  
 IT 19200-79-4P  
     (formation of, in hydrolysis of titanium fluoride (TiF4) in  
     presence of 4-picoline 1-oxide)  
 IT 19200-78-3P  
     (formation of, in hydrolysis of titanium fluoride (TiF4) in  
     presence of N,N-dimethylformamide)  
 IT 19200-77-2P  
     (formation of, in hydrolysis of titanium fluoride (TiF4) in  
     presence of ethyl alc.)  
 IT 7783-63-3 16894-18-1 21591-33-3  
     (hydrolysis of)

L47 ANSWER 15 OF 18 HCA COPYRIGHT 2008 ACS on STN

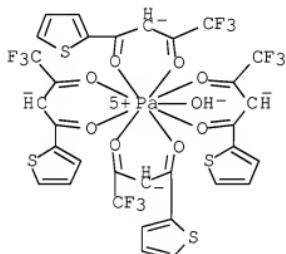
AN 66:14485 HCA Full-text

OREF 66:2815a,2818a

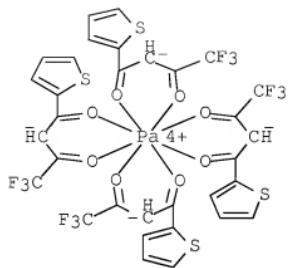
TI Ionic species of protactinium in aqueous solution

AU Guillaumont, Robert

- CS Inst. Phys. Nucl., Val-de-Marne, Fr.  
 SO Revue de Chimie Minerale (1966), 3(2), 339-73  
 CODEN: RVCMA8; ISSN: 0035-1032  
 DT Journal  
 LA French  
 AB cf. CA 64, 13453h; 65, 9813d. Solvent extn. of Pa in the form of chelates showed the existence of Pa (V) and Pa(IV) without the formation of  $\text{PaOOH}_2^+$  and  $\text{Pa}^{4+}$  species.  $\text{PaOOH}_2^+$  is stable in 1-3N  $\text{HClO}_4$  and does not polymerize. However, in an acid medium (pH 3) it hydrolyzes to  $\text{PaO(OH)}_2^+$ . The  $\text{Pa}^{4+}$  forms the trimer in 3N  $\text{HClO}_4$  even at a concn. of 10-5M. Comparison of the hydrolysis consts. of  $\text{Pa}^{4+}$  with those of  $\text{Th}^{4+}$ ,  $\text{U}^{4+}$ ,  $\text{Np}^{4+}$ , and  $\text{Pu}^{4+}$  shows that this ion is very much more acidic. The complexation const. for  $\text{PaOOH}_2^+$  and  $\text{Pa}^{4+}$  in  $\text{HNO}_3$ ,  $\text{HCl}$ ,  $\text{H}_2\text{SO}_4$ ,  $\text{HF}$ , and  $\text{H}_2\text{C}_2\text{O}_4$  mediums were also detd. While previous workers suggested the existence of  $\text{Pa(C}_2\text{O}_4)_3^-$  and  $\text{Pa(C}_2\text{O}_4)_43^-$ , the author believes that these ions are really  $\text{PaOC}_2\text{O}_4^-$  and  $\text{PaO(C}_2\text{O}_4)_2^-$ . Also, the ppt. obtained by the addn. of  $\text{HF}$  to a soln. of Pa(IV) is  $\text{PaF}_2\text{SO}_4$  and can be transformed to  $\text{PaF}_4$  by washing with  $\text{HF}$ .  
 IT 12091-72-4 12102-26-0, Protactinium,  
 tetrakis[4,4,4-trifluoro-1-(2-thienyl)-1,3-butanedionato]-  
 (extn. of, from aq. soln.)  
 RN 12091-72-4 HCA  
 CN Protactinium, hydroxytetrakis[4,4,4-trifluoro-1-(2-thienyl)-1,3-  
 butanedionato-O,O']- (9CI) (CA INDEX NAME)



- RN 12102-26-0 HCA  
 CN Protactinium, tetrakis[4,4,4-trifluoro-1-(2-thienyl)-1,3-  
 butanedionato-O,O']- (9CI) (CA INDEX NAME)



IT 13842-89-2P 14946-90-8P 14946-91-9P  
 (prepn. of)

RN 13842-89-2 HCA

CN Protactinium fluoride (PaF<sub>4</sub>) (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 14946-90-8 HCA

CN Protactinium(3+), fluoro-, ion (8CI) (CA INDEX NAME)



RN 14946-91-9 HCA

CN Protactinium(2+), difluoro-, ion (8CI) (CA INDEX NAME)



CC 68 (Phase Equilibria, Chemical Equilibria, and Solutions)

IT 12091-72-4 12102-26-0, Protactinium,  
 tetrakis[4,4,4-trifluoro-1-(2-thienyl)-1,3-butanedionato]-  
 17275-47-7 17275-48-8  
 (extn. of, from aq. soln.)  
 IT 120-46-7DP, 1,3-Propanedione, 1,3-diphenyl-, protactinium complex  
 326-91-0DP, 1,3-Butanedione, 4,4,4-trifluoro-1-(2-thienyl)-,  
 protactinium complexes 13842-89-2P 14016-96-7P  
 14373-87-6P 14373-89-8P 14691-41-9P 14946-75-9P 14946-76-0P  
 14946-77-1P 14946-78-2P 14946-79-3P 14946-80-6P 14946-81-7P  
 14946-82-8P 14946-83-9P 14946-84-0P 14946-85-1P 14946-86-2P  
 14946-87-3P 14946-88-4P 14946-89-5P 14946-90-8P  
 14946-91-9P 15091-99-3P 15092-00-9P 15092-01-0P  
 15213-76-0P 15244-16-3P  
 (prepn. of)

L47 ANSWER 16 OF 18 HCA COPYRIGHT 2008 ACS on STN

AN 57:27984 HCA Full-text

OREF 57:5556e-f

TI Preparation and properties of vanadium tetrafluoride

AU Cavell, R. G.; Clark, H. C.

CS Univ. British Columbia, Vancouver, Can.

SO Journal of the Chemical Society (1962) 2692-98

CODEN: JCSOA9; ISSN: 0368-1769

DT Journal

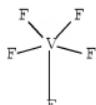
LA Unavailable

AB Reaction of VC14 and anhyd. HF in Cl3CF soln. to give pure VF4 is described. The results of d., magnetic susceptibility, and crystallographic measurements on the tetrafluoride are reported. The salt K2VF8 has been obtained from KF and VF4 in SeF4 soln., but the analogous Cs salt cannot be obtained pure. VF4 reacts with NH3 and pyridine to give the same products as does VF5. Other chem. reactions of VF4 are also reported.

IT 7783-72-4P, Vanadium fluoride, VF5  
 (formation from F and VF4)

RN 7783-72-4 HCA

CN Vanadium fluoride (VF5) (CA INDEX NAME)

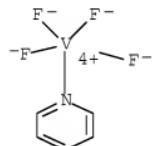


IT 10049-16-8P, Vanadium fluoride, VF4

(prep. and properties of)  
RN 10049-16-8 HCA  
CN Vanadium fluoride (VF4) (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 92275-42-8P, Vanadium, tetrafluoro(pyridine)-  
(prep. of)  
RN 92275-42-8 HCA  
CN Vanadium, tetrafluoro(pyridine)- (CA INDEX NAME)



CC 14 (Inorganic Chemicals and Reactions)  
IT 7783-72-4P, Vanadium fluoride, VF5  
(formation from F and VF4)  
IT 10049-16-8P, Vanadium fluoride, VF4  
(prep. and properties of)  
IT 92275-42-8P, Vanadium, tetrafluoro(pyridine)- 99119-11-6P,  
Vanadium, tetrafluoroammine- 101059-20-5P, Selenium fluoride,  
SeF<sub>4</sub>, compd. with VF4 (1:1)  
(prep. of)

L47 ANSWER 17 OF 18 HCA COPYRIGHT 2008 ACS on STN

AN 57:9185 HCA Full-text

OREF 57:1832h

TI Chemistry of the difluorides of germanium and tin

AU Muetterties, E. L.

CS E. I. DuPont de Nemours & Co., Wilimington, DE

SO Inorg. Chem. (1962), 1, 342-5

DT Journal

LA Unavailable

AB Ge and Sn are treated with HF to give good yields of the difluoride salts. The complexes of the salts with F<sup>-</sup> and with org. bases are described. GeF<sub>3</sub>- has greater hydrolytic stability than SnF<sub>3</sub>-, and solns. of the latter slowly deposit SnO. All of the complexes are oxidized by O.

IT 13940-63-1

(Derived from data in the 7th Collective Formula Index  
(1962-1966))

RN 13940-63-1 HCA

CN Germanium fluoride (GeF<sub>2</sub>) (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

F—Ge—F

IT 7783-47-3P, Tin fluoride, SnF<sub>2</sub> 127386-52-1P,  
Germanium fluoride  
(prepn. and properties of)

RN 7783-47-3 HCA

CN Tin fluoride (SnF<sub>2</sub>) (CA INDEX NAME)

F—Sn—F

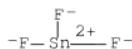
RN 127386-52-1 HCA  
CN Germanium fluoride (CA INDEX NAME)

Component	Ratio	Component	
			Registry Number
F	x		14762-94-8
Ge	x		7440-56-4

IT 14314-36-4P, Stannate(II), trifluoro- 18538-21-1P,  
Germanate(IV), hexafluoro 21340-04-5P, Stannate(IV),  
hexafluoro- 26586-93-6P, Tin, difluoro(methyl sulfoxide)-  
91846-04-7P, Germanium, difluoro(methyl sulfoxide)-  
(prepn. of)

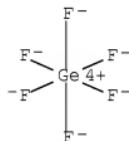
RN 14314-36-4 HCA

CN Stannate(1-), trifluoro- (8CI, 9CI) (CA INDEX NAME)



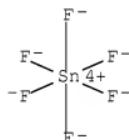
RN 18588-21-1 HCA

CN Germanate(2-), hexafluoro-, (OC-6-11)- (CA INDEX NAME)



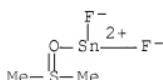
RN 21340-04-5 HCA

CN Stannate(2-), hexafluoro-, (OC-6-11)- (CA INDEX NAME)



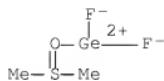
RN 26586-93-6 HCA

CN Tin, difluoro[sulfinylbis[methane]-O]- (9CI) (CA INDEX NAME)



RN 91846-04-7 HCA

CN Germanium, difluoro(methyl sulfoxide)- (7CI) (CA INDEX NAME)



- CC 14 (Inorganic Chemicals and Reactions)  
IT 13940-63-1 16893-93-9 16962-19-9 72121-42-7  
(Derived from data in the 7th Collective Formula Index  
(1962-1966))  
IT 7783-47-3P, Tin fluoride, SnF<sub>2</sub> 127386-52-1P,  
Germanium fluoride  
(prepn. and properties of)  
IT 14314-36-4P, Stannate(II), trifluoro- 18588-21-1P,  
Germanate(IV), hexafluoro 21340-04-5P, Stannate(IV),  
hexafluoro- 26586-93-6P, Tin, difluoro(methyl sulfoxide)-  
91846-04-7P, Germanium, difluoro(methyl sulfoxide)-  
(prepn. of)
- L47 ANSWER 18 OF 18 HCA COPYRIGHT 2008 ACS on STN  
AN 55:1217 HCA Full-text  
OREF 55:197b-e  
TI Sulfur tetrafluoride. IV. Fluorination of inorganic oxides and  
sulfides  
AU Oppegard, A. L.; Smith, W. C.; Muettterties, E. L.; Engelhardt, V. A.  
CS E. I. du Pont de Nemours & Co., Wilmington, DE  
SO Journal of the American Chemical Society (1960), 82,  
3835-8  
CODEN: JACSAT; ISSN: 0002-7863  
DT Journal  
LA Unavailable  
GI For diagram(s), see printed CA Issue.  
AB cf. CA 54, 14091f. SF<sub>4</sub> reacted with many inorg. oxides and sulfides  
by replacement of the O or S to give corresponding fluorides or  
oxyfluorides. Generally the S was completely replaced by F, but the  
O in some cases was incompletely replaced to give oxyfluorides. The  
following ionic fluorides were prep'd. in pressure vessels at 60-350°  
in 1-12 hrs.: ZnF<sub>2</sub>, HgF<sub>2</sub>, BiF<sub>3</sub>, and FeF<sub>3</sub>. The following covalent  
fluorides and oxyfluorides were prep'd. in pressure vessels at 60-435°  
in 0.5-18 hrs.: SF<sub>4</sub>.BF<sub>3</sub>, TiF<sub>4</sub>.2HCONMe<sub>2</sub>, GeF<sub>4</sub>.2SF<sub>4</sub>, SnF<sub>4</sub>.2HCONMe<sub>2</sub>,  
POF<sub>3</sub>, PF<sub>5</sub>, SOF<sub>2</sub>, S<sub>2</sub>O<sub>5</sub>F<sub>2</sub>, SO<sub>2</sub>F<sub>2</sub>, SeF<sub>4</sub>, MoF<sub>4</sub>.2Me<sub>2</sub>SO, MoF<sub>6</sub>, WF<sub>6</sub>, UF<sub>6</sub>,  
IF<sub>5</sub>, and UF<sub>4</sub>. Several covalent fluorides were made in a flow system  
at atm. pressure: UF<sub>6</sub> from UO<sub>3</sub>, UF<sub>6</sub> from UO<sub>2</sub>F<sub>2</sub>, and UF<sub>6</sub> and UF<sub>4</sub> from  
U<sub>3</sub>O<sub>8</sub>. Expts. with SF<sub>4</sub> and covalent fluorides showed definite compd.

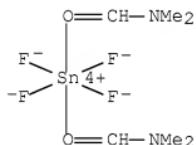
formation: HF-SF<sub>4</sub>, SbF<sub>5</sub>SF<sub>4</sub>, PF<sub>5</sub>-SF<sub>4</sub>, and AsF<sub>3</sub>-SF<sub>4</sub>. The structures of the SF<sub>4</sub> complexes were not given, but 3 suggested structures were presented: (1) an acid-base complex, F<sub>3</sub>B  $\leftarrow$  :SF<sub>4</sub>; (2) a salt with SF<sub>3</sub><sup>+</sup> cation; and (3) a structure with F bridge bonds, infrared and mass spectrometer analyses of some of the products were obtained; and a F nuclear magnetic resonance spectrum for IF<sub>5</sub> was obtained.

IT 21673-63-7 126219-54-3

(Derived from data in the 6th Collective Formula Index  
(1957-1961))

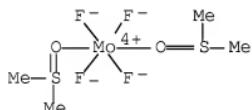
RN 21673-68-7 HCA

CN Tin, bis(N,N-dimethylformamide-O)tetrafluoro-, (OC-6-11)- (9CI) (CA INDEX NAME)



RN 126219-54-3 HCA

CN Methyl sulfoxide, molybdenum complex (6CI) (CA INDEX NAME)



IT 7664-39-3P, Hydrofluoric acid, compds.

with SF4 7783-39-3P, Mercury fluoride, HgF2

7783-49-5B. Zinc fluoride 7783-50-8B. Iron

fluoride,  $\text{FeF}_3$ , 7783-33-2B Molybdenum fluoride,  $\text{MoF}_6$

**Tungsten fluoride**, WEF 7383-83-6B. Tungsten fluoride. WEF 7383-61-3B.

7785-32-61, Tungsten 13  
Bismuth fluoride BiF<sub>3</sub>

#### **Smooth fluorine**

(prep. of)

RN 7664-39-3 HCA

HF

RN 7783-39-3 HCA  
CN Mercury fluoride (HgF<sub>2</sub>) (CA INDEX NAME)



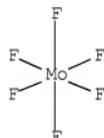
RN 7783-49-5 HCA  
CN Zinc fluoride (ZnF<sub>2</sub>) (CA INDEX NAME)



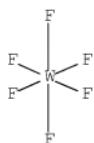
RN 7783-50-8 HCA  
CN Iron fluoride (FeF<sub>3</sub>) (CA INDEX NAME)



RN 7783-77-9 HCA  
CN Molybdenum fluoride (MoF<sub>6</sub>), (OC-6-11)- (CA INDEX NAME)



RN 7783-82-6 HCA  
CN Tungsten fluoride (WF<sub>6</sub>), (OC-6-11)- (CA INDEX NAME)



RN 7787-61-3 HCA  
 CN Bismuthine, trifluoro- (CA INDEX NAME)



IT 11133-71-4P, Uranium fluoride  
     (prepn. of UF4 and UF6)  
 RN 11133-71-4 HCA  
 CN Uranium fluoride (CA INDEX NAME)

Component	Ratio	Component
		Registry Number
F	x	14762-94-8
U	x	7440-61-1

CC 6 (Inorganic Chemistry)  
 IT 17761-33-0 21673-68-7 35963-96-3 35963-97-4  
 91443-79-7 126219-54-3 126506-48-7 128601-82-1  
     (Derived from data in the 6th Collective Formula Index  
     (1957-1961))  
 IT 2699-79-8P, Sulfuryl fluoride 7664-39-3P,  
     Hydrofluoric acid, compds. with SF4  
 7783-39-3P, Mercury fluoride, HgF2 7783-42-8P, Thionyl  
     fluoride 7783-49-5P, Zinc fluoride 7783-50-8P,  
     Iron fluoride, FeF3 7783-77-9P, Molybdenum fluoride, MoF6  
 7783-82-6P, Tungsten fluoride, WF6 7787-61-3P,  
     Bismuth fluoride, BiF3 13036-75-4P, Pyrosulfuryl fluoride  
 13465-66-2P, Selenium fluoride, SeF4 13478-20-1P, Phosphoryl  
     fluoride 25431-30-5P, Antimony fluoride, SbF5, compd. with SF4  
     (prepn. of)  
 IT 11133-71-4P, Uranium fluoride

(prepn. of UF<sub>4</sub> and UF<sub>6</sub>)